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A New Species of Trigonia from the Sundays River Beds of the Uitenhage Series, Cape Province.

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With Plate I.

THE following species of *Trigonia* have been described from the Sundays River Beds :

Genus *Trigonia* Bruguière.
  Subgenus *Pleurotrigonia* van Hoepen.
    Trigonia tatei Neumayr.

Genus *Megatrigonia* van Hoepen.
  Subgenus *Megatrigonia* van Hoepen.
    Trigonia conocordiiformis (Krauss).
  Subgenus *Iotrigonia* van Hoepen.
    Trigonia vau Sharpe.
    Trigonia stowi Kitchin.

Genus *Yaadia* Crickmay.
    Trigonia herzogi Hausmann.
    Trigonia holubi Kitchin.

Genus *Pterotrigonia* van Hoepen.
    Trigonia rogersi Kitchin.
    Trigonia kraussi Kitchin.
    Trigonia ventricosa Krauss.

The above species were either described or reviewed by F. L. Kitchin in his Monograph of 1908, ' Annals of the South African Museum', vol. **7**, 21–250.

In 1915 another species was described by E. H. L. Schwarz in the 'Records of the Albany Museum', vol. **3**, 120–126.

Genus *Pterotrigonia* van Hoepen
    Trigonia kitchini Schwarz

During the time when I was Director of the Museum and Snake Park in Port Elizabeth periodic visits were made to the Sundays River Beds to collect fossils. The claypits at Amsterdam Hoek and Coega and the deposits along the banks of the Sundays River were the main collecting areas. In this field work I was ably assisted by the late Mr. D. Woodhead of Port Elizabeth and Mr. Ian Knight formerly of Summerville.

The following new species was collected by Ian Knight and it is named after him.

Trigonia knighti n. sp.

Diagnosis.—Club-shaped, massive and rostrate. Anterior surface somewhat flattened and oval. Costæ on the anterior portion of the flank greatly elevated with irregular and coarse tubercles widely separated; remainder of costæ much less prominent, without tubercles and closer together. Escutcheon with transverse parallel ribs.

Description of the species.—The shell is massive, inequilateral, anterior portion inflated and posterior rostrate. The margins of the anterior and ventral surfaces form the arc of an elipse, while the dorsal margin is slightly concave. The dorsal and ventral margins taper rapidly to the posterior end. The umbo is located high on the dorsal surface, and its distance from the anterior end is about one-sixth of the total length.

In front view the outline of the shell is roughly oval, while the centre of this face is somewhat flattened and at right angles to the long axis. The flattened anterior face meets the flank in an obtuse angle which forms a prominent ridge from the umbo downwards, but disappears towards the ventral margin. The costæ towards the anterior portion of the shell are curved, elevated, widely separated with a few irregular nodules, while the costæ on the posterior portion of the flank are almost straight, much less prominent, closer together and beaded. The irregular nodules of the anterior costæ occur over the obtuse angle mentioned above.

The costæ on the anterior face are reduced, and extend right to the margin where they terminate adjacent to those of the opposite side. On the ventral surface the costæ terminate alternately. The area is narrow near the umbo but gradually widens towards the posterior end. The marginal and inner carina are not clearly defined but there is a distinct longitudinal median groove. The escutcheon is broad and slopes from the dorsal margin to the inner carina. It is covered by a number of transverse ribs which are finely beaded and tend to run slightly forward along the inner carina.

Distribution.—These specimens were collected at the brickfields near the village of Amsterdam Hoek (about ten miles from Port Elizabeth on the Grahamstown road).

Measurements.

	(1)	(2)	(3)	(4)	(5)	(6)
Length	109+	108+	—	90+	82+	30+
Height	110	107	105	90	95+	38
Thickness	46	40+	45	38	42	15

Holotype : (1) in the Port Elizabeth Museum
Paratypes : (2) and (3) in the British Museum, (4) in the Natal Museum

DISCUSSION.

T. knighti is by far the most massive species of the Pterotrigonias from the Sundays River Beds. It resembles *T. kitchini* in shape, but the latter is much smaller and the costæ less prominent.

The proportions of height to width of one valve are summarized in the following Table :

	Height/Width average (%).
T. rogersi . .	38
T. knighti . .	41
T. kitchini . .	43
T. ventricosa . .	51
T. kraussi . .	55

A striking feature of *T. knighti* is the elevated and nodular development of the costæ along the lateral margin. The height of the nodules above the intercostal area reaches up to 9 mm. In the other species mentioned above this height seldom exceeds 2 mm. Several juvenile specimens of *T. knighti* are also available and these exhibit the same elevated costæ and nodules as in the adults.

ACKNOWLEDGMENTS.

I wish to thank Dr. G. R. McLachlan of the Port Elizabeth Museum and Snake Park for the loan of numerous specimens of various species of *Trigonia.* I am also grateful to Dr. J. Hewitt, former Director of the Albany Museum, for the loan of the type specimen of *Trigonia kitchini* Schwarz.

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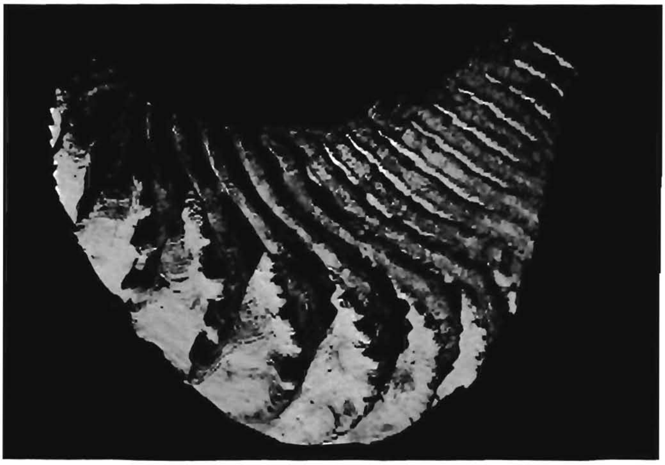
EXPLANATION OF PLATE I.

Illustrating Dr. J. A. Pringle's paper, " A New Species of Trigonia from the Sundays River Beds of the Uitenhage Series, Cape Province."

Trigonia knighti n. sp. Holotype.

1. Lateral view. 2. Anterior view. 3. Dorsal view.



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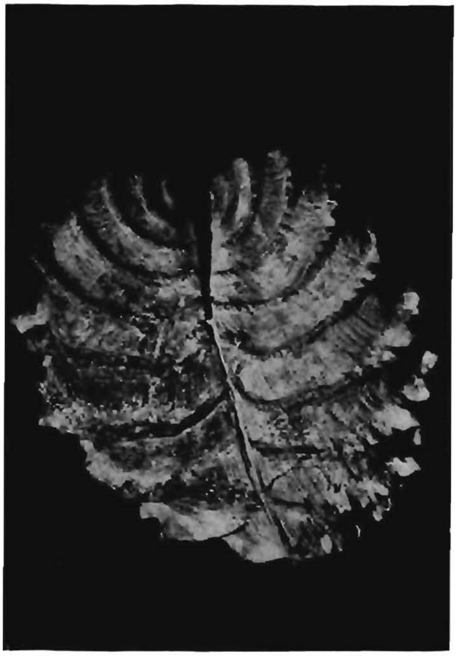

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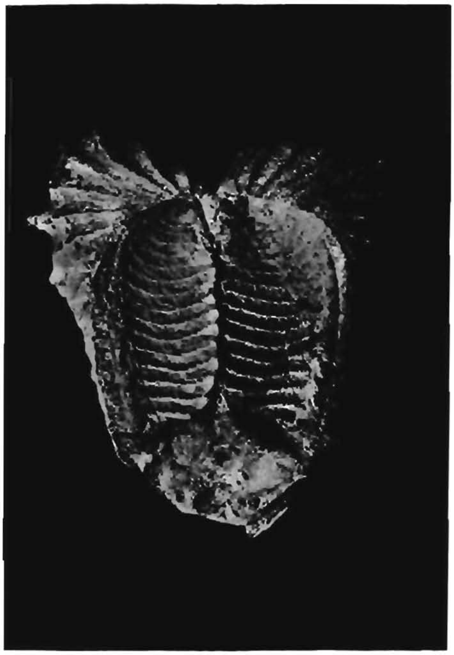

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